

Application No. 10/614,197

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for detecting cracks in a honeycomb structure which includes a plurality of cells penetrating ~~itself from its one end face to the other~~another end face of the honeycomb structure, comprising the steps of:

placing the honeycomb structure on ~~the~~an upper face of a first plate with the two end faces of the honeycomb structure facing up and down, respectively;

applying to the honeycomb structure an impact load adequately heavy to make a powdery substance fall off ~~of the cracked portions~~ of the honeycomb structure; and

detecting ~~the cracks~~cracked portions in the honeycomb structure by detecting the powdery substance having fallen off the cracked portions.

2. (Original) The method for detecting cracks in a honeycomb structure according to claim 1, wherein the impact load is applied to the upper face of the honeycomb structure.

3. (Currently Amended) The method for detecting cracks in a honeycomb structure according to claim 2, wherein the impact load is applied to the honeycomb structure ~~in such a manner as to dispose a second plate on~~by crashing the impact load into a second plate disposed on the upper face of the honeycomb structure and crash an impact member into the plate.

4. (Currently Amended) The method for detecting cracks in a honeycomb structure according to claim 3, wherein the impact ~~member load~~is crashed into the second plate by ~~leaving~~allowing the impact member to ~~spontaneously~~ fall to the second plate.

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5. (Original) The method for detecting cracks in a honeycomb structure according to claim 3, wherein the impact load is applied after a first cushioning member is disposed between the honeycomb structure and the second plate.

6. (Currently Amended) The method for detecting cracks in a honeycomb structure according to claim 5, wherein ~~the~~ an area of the first cushioning ~~member's face~~ member facing the honeycomb structure is smaller than an area ~~that~~ of the upper face of the honeycomb structure.

7. (Currently Amended) The method for detecting cracks in a honeycomb structure according to claim 5, wherein the impact load is applied after a second cushioning member is disposed between the upper face of the first plate and ~~the~~ a lower face of the honeycomb structure.

8. (Currently Amended) The method for detecting cracks in a honeycomb structure according to claim 7, wherein ~~the~~ an area of the second cushioning ~~member's face~~ member facing the honeycomb structure is smaller than ~~that~~ an area of the lower face of the honeycomb structure.

9. (Currently Amended) The method for detecting cracks in a honeycomb structure according to claim 5, wherein the first cushioning member is ~~made up~~ comprised of at least one kind of material selected from the group consisting of paper, rubber and plastics materials.

10. - (Currently Amended) The method for detecting cracks in a honeycomb structure according to claim 7, wherein the second cushioning member is ~~made up~~ comprised of at least one kind of material selected from the group consisting of paper, rubber and plastics materials.

11. (Currently Amended) The method for detecting cracks in a honeycomb structure according to claim 3, wherein the impact ~~member load~~ is ~~made up~~ comprised of at

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least one kind of material selected from the group consisting of metal, stone, ceramic and wood materials.

12. (Currently Amended) The method for detecting cracks in a honeycomb structure according to claim 3, wherein ~~the~~ an area of the second ~~plate's face~~ plate facing the honeycomb structure is smaller than ~~that~~ an area of the upper face of the honeycomb structure.

13. (Currently Amended) The method for detecting cracks in a honeycomb structure according to claim 3, wherein the second plate is ~~made up~~ comprised of at least one kind of material selected from the group consisting of metal, stone, ceramic and wood materials.

14. (Currently Amended) The method for detecting cracks in a honeycomb structure according to claim 2, wherein the impact load is applied to the honeycomb structure ~~in such a manner as to dispose by crashing the impact load into a first cushioning member disposed on the upper face of the honeycomb structure and crash the impact member into the first cushioning member.~~

15. (Currently Amended) The method for detecting cracks in a honeycomb structure according to claim 1, wherein ~~the~~ an area of the upper face of the first plate is smaller than ~~that~~ the area of the ~~a~~ lower face of the honeycomb structure.

16. (Currently Amended) The method for detecting cracks in a honeycomb structure according to claim 1, wherein the upper face of the first plate is ~~made up~~ comprised of at least one kind of material selected from the group consisting of metal, stone, ceramic and wood materials.

17. (Currently Amended) The method for detecting cracks in a honeycomb structure according to claim 1, wherein ~~the~~ a color of the upper face of the first plate is different from ~~that~~ the color of the powdery substance.

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18. (Currently Amended) The method for detecting cracks in a honeycomb structure according to claim 7, wherein ~~the~~ a color of the second cushioning member is different from ~~that~~ the color of the powdery substance.

19. (Original) The method for detecting cracks in a honeycomb structure according to claim 1, wherein the impact load is applied to the honeycomb structure after a discrimination sheet having a face colored differently from the powdery substance is disposed between the lower face of the honeycomb structure and the upper face of the first plate in such a manner that the face colored differently from the powdery substance faces the honeycomb structure.

20. (Currently Amended) An apparatus for detecting cracks in a honeycomb structure which includes a plurality of cells penetrating ~~itself~~ from its one end face to ~~the other~~ another end face of the honeycomb structure, comprising:

a first plate having ~~a~~ an upper face where the honeycomb structure is placed with ~~its~~ the two end faces facing up and down, respectively; and

impact means for applying to the honeycomb structure an impact load adequately heavy to make a powdery substance fall off the cracked portions of the honeycomb structure, wherein the powdery substance from the cracked portions indicates cracks in the honeycomb structure.

21. (Currently Amended) The apparatus for detecting cracks in a honeycomb structure according to claim 20, wherein the impact means applies the impact load to the upper face of the honeycomb structure.

22. (Original) The apparatus for detecting cracks in a honeycomb structure according to claim 20, further comprising a second plate disposed on the upper face of the honeycomb structure, wherein the impact means includes an impact member which is crashed into the second plate.

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23. (Currently Amended) The apparatus for detecting cracks in a honeycomb structure according to claim 22, wherein the impact means leaves the impact member to ~~spontaneously~~ fall to the second plate.

24. (Original) The apparatus for detecting cracks in a honeycomb structure according to claim 22, further comprising a first cushioning member disposed between the honeycomb structure and the second plate.

25. (Currently Amended) The apparatus for detecting cracks in a honeycomb structure according to claim 24, wherein ~~the~~an area of the first cushioning ~~member's face~~member facing the honeycomb structure is smaller than ~~that~~an area of the upper face of the honeycomb structure.

26. (Currently Amended) The apparatus for detecting cracks in a honeycomb structure according to claim 24, further comprising a second cushioning member disposed between the upper face of the first plate and ~~the~~a lower face of the honeycomb structure.

27. (Currently Amended) The apparatus for detecting cracks in a honeycomb structure according to claim 26, wherein ~~the~~an area of the second cushioning ~~member's face~~member facing the honeycomb structure is smaller than ~~that~~an area of the lower face of the honeycomb structure.

28. (Currently Amended) The apparatus for detecting cracks in a honeycomb structure according to claim 24, wherein the first cushioning member is ~~made up~~comprised of at least one kind of material selected from the group consisting of paper, rubber and plastics materials.

29. (Currently Amended) The apparatus for detecting cracks in a honeycomb structure according to claim 26, wherein the second cushioning member is ~~made up~~comprised of at least one kind of material selected from the group consisting of paper, rubber and plastics materials.

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30. (Currently Amended) The apparatus for detecting cracks in a honeycomb structure according to claim 22, wherein the impact member is ~~made up~~ comprised of at least one kind of material selected from the group consisting of metal, stone, ceramic and wood materials.

31. (Currently Amended) The apparatus for detecting cracks in a honeycomb structure according to claim 22, wherein ~~the an~~ an area of the second ~~plate's face~~ plate facing the honeycomb structure is smaller than ~~that an area~~ an area of the upper face of the honeycomb structure.

32. (Currently Amended) The apparatus for detecting cracks in a honeycomb structure according to claim 22, wherein the second plate is ~~made up~~ comprised of at least one kind of material selected from the group consisting of metal, stone, ceramic and wood materials.

33. (Original) The apparatus for detecting cracks in a honeycomb structure according to claim 21, further comprising a first cushioning member disposed on the upper face of the honeycomb structure, wherein the impact means includes an impact member which is crashed into the first cushioning member.

34. (Currently Amended) The apparatus for detecting cracks in a honeycomb structure according to claim 20, wherein ~~the an~~ an area of the upper face of the first plate is smaller than ~~that an area of the a~~ an area of the a lower face of the honeycomb structure.

35. (Currently Amended) The apparatus for detecting cracks in a honeycomb structure according to claim 20, wherein the upper face of the first plate is ~~made up~~ comprised of at least one kind of material selected from the group consisting of metal, stone, ceramic and wood materials.

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36. (Currently Amended) The apparatus for detecting cracks in a honeycomb structure according to claim 20, wherein ~~the~~ a color of the upper face of the first plate is different from ~~that~~ a color of the powdery substance.

37. (Currently Amended) The apparatus for detecting cracks in a honeycomb structure according to claim 26, wherein ~~the~~ a color of the second cushioning member is different from ~~that~~ a color of the powdery substance.

38. (Currently Amended) The apparatus for detecting cracks in a honeycomb structure according to claim 20, further comprising a discrimination sheet which has a face differently colored from the powdery substance and is disposed between ~~the~~ a lower face of the honeycomb structure and the upper face of the first plate in such a manner that the face differently colored from the powdery substance faces the honeycomb structure.

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